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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,767

10/19/2005

Zenon Lysenko

62260A

7734

109 7590 10/01/2009

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Intellectual Property Section  
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EXAMINER

GODENSCHWAGER, PETER F

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

10/01/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,767	<b>Applicant(s)</b> LYSENKO ET AL.	
	<b>Examiner</b> PETER F. GODENSCHWAGER	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-19, 21, 23, 42 and 45-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-19, 21, 23, 42 and 45-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/26/2009</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 26, 2009 has been entered.

Applicant's reply filed June 26, 2009 has been fully considered. Claims 12, 18, 19, 21, and 23 are amended, claims 45-52 are new, and claims 12-19, 21, 23, 42, and 45-52 are pending.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 46, 47-49, and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 46 and 52: Claim 46 recites dependency from itself, and therefore it is not clear what claim it is intended to depend from. For purposes of further examination, claim 46 is being interpreted as depending from claim 45.

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Regarding Claims 47-49: Claim 47 recites dependency from itself, and therefore it is not clear what claim it is intended to depend from. For purposes of further examination, claim 47 is being interpreted as depending from claim 45.

Regarding Claim 51: Claim 51 recites dependency from itself, and therefore it is not clear what claim it is intended to depend from. For purposes of further examination, claim 51 is being interpreted as depending from claim 50.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

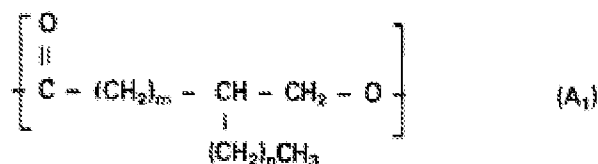
Claims 12-17, 19, 21, 23, 42, 50, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peerman et al. (EP Pub. 0 106 491 A2).

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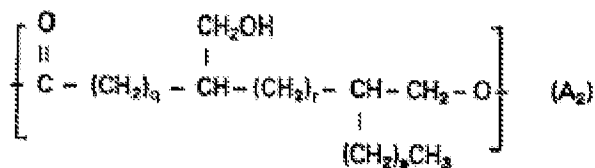
Regarding Claims 12-14: Peerman et al. teaches a polyol of the following formula:



where p is an integer from 2-6, α is an integer from 0-10 (therefore satisfying formulas (I) and (II) of instant claim 12 containing both groups [X-H] and [X-A-H]), X is O, and R is a polyol residue (abstract). Peerman et al. further teaches that each A may be the same or different and selected from groups A<sub>1</sub>, A<sub>2</sub>, and A<sub>3</sub>, where A<sub>1</sub> is:



and A<sub>2</sub> is:



corresponding to A<sub>1</sub> and A<sub>2</sub> of the instant claims (abstract). Peerman et al. teaches that m, n, q, r, and s (m, n, v, r, and s of instant claim 12) are integers, m is greater than 3, n is greater than or equal to zero, m+n is 11-19 (anticipating the instant claim), q, r, and s are integers, q is greater than 3, r and s are greater than or equal to zero, and q+r+s is from 10-18 (anticipating the instant claim) (abstract). Peerman et al. further teaches using polyol residues (R) that is alkoxylated with an alkoxylating agent such as ethylene oxide or propylene oxide (Pg. 14, Lns. 14-30).

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Peerman et al. does not teach that R is alkoxyated to the extent that R obtains a molecular weight of 625. However, it is common practice in the art to optimize result effective variables such as the degree of alkoxylation desired in a polyol for use in forming polyurethanes. At the time of the invention, a person of ordinary skill in the art would have found it obvious to optimize the degree of alkoxylation desired in the polyol R, and would have been motivated to do so to optimize the elastic properties of the resulting polyurethane which is dependent on polyol chain length as taught by Peerman et al. (Pg. 23, Lns. 32-35).

Peerman et al. does not teach the residue of the polyol further comprises a structure corresponding to A3 in the instant claims. However, homologs - compounds which differ regularly by the successive addition of the same chemical groups – are generally of sufficiently close structure similar that there is a presumed expectation that such compounds possess similar properties. A3 differs from A<sub>2</sub> disclosed by Peerman et al. only in that an additional –CHCH<sub>2</sub>OH–(CH<sub>2</sub>)<sub>r</sub> group is added onto the existing –CHCH<sub>2</sub>OH–(CH<sub>2</sub>)<sub>r</sub> group in the structure. The presence of an additional –CHCH<sub>2</sub>OH–(CH<sub>2</sub>)<sub>r</sub> group in A<sub>2</sub> disclosed by Peerman would provide advantages such increasing the polyols reactivity with isocyanate.

Regarding Claims 15 and 19: Peerman et al. teaches that the polyol (R) may be 2,5-hexanediol (a polyol of instant claim 19, and a polyol with a secondary hydroxyl group), and thus the XH and XAH will inherently either be on primary and secondary hydroxyl groups respectively, or secondary and primary hydroxy groups respectively. (Pg. 11, Lns. 23-25).

Regarding Claims 21, 23, 50, and 51: Peerman et al. teaches that the polyols should be liquid (Pg. 26, Lns. 24-26), and may include polyol residues (R) with molecular weight of 2800 (Pg. 11, Ln. 23 to Pg. 12, Ln. 4).

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Regarding Claim 42: Peerman et al. teach the polyol of Claim 12 wherein the polyol is reacted with a polyisocyanate to form a polyurethane (Pg. 20, Lns. 31-36).

Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peerman et al. (EP Pub. 0 106 491 A2) when taken with Rogier (US Pat. No. 4,216,344).

Peerman et al. render obvious the polyol of claim 12 as set forth above.

Peerman et al. teaches that triols disclosed in Rogier may be used (Pg. 12, Lns. 10-12). Rogier specifically discloses the triol may be glycerol (11:53-58). As glycerol has two primary hydroxyls and one secondary hydroxyls, and there are only thus only six possible combinations of ways to position either XH or XAH groups on the hydroxyl groups, all such combinations would could immediately be envisioned by one of ordinary skill in the art when employing glycerol as R, and thus such species would be anticipated.

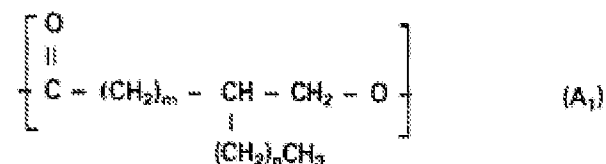
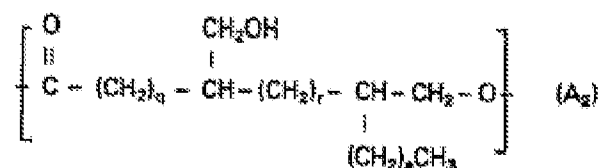
Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peerman et al. (EP Pub. 0 106 491 A2).

Peerman et al. teaches a polyol of the following formula:



where p is an integer from 2-6, α is an integer from 0-10 (therefore satisfying formulas (I) and (II) of instant claim 12 containing both groups [X-H] and [X-A-H]), X is O, and R is a polyol residue (abstract). Peerman et al. further teaches that each A may be the same or different and selected from groups A<sub>1</sub>, A<sub>2</sub>, and A<sub>3</sub>, where A<sub>1</sub> is:

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and A<sub>2</sub> is:

corresponding to A<sub>1</sub> and A<sub>2</sub> of the instant claims (abstract). Peerman et al. teaches that m, n, q, r, and s (m, n, v, r, and s of instant claim 12) are integers, m is greater than 3, n is greater than or equal to zero, m+n is 11-19 (anticipating the instant claim), q, r, and s are integers, q is greater than 3, r and s are greater than or equal to zero, and q+r+s is from 10-18 (anticipating the instant claim) (abstract). Peerman et al. further teaches using polyol residues (R) that is alkoxyated with an alkoxyating agent such as ethylene oxide or propylene oxide (Pg. 14, Lns. 14-30).

Peerman et al. does not teach the residue of the polyol further comprises a structure corresponding to A<sub>3</sub> in the instant claims. However, homologs - compounds which differ regularly by the successive addition of the same chemical groups - are generally of sufficiently close structure similar that there is a presumed expectation that such compounds possess similar properties. A<sub>3</sub> differs from A<sub>2</sub> disclosed by Peerman et al. only in that an additional -CHCH<sub>2</sub>OH-(CH<sub>2</sub>)<sub>r</sub> group is added onto the existing -CHCH<sub>2</sub>OH-(CH<sub>2</sub>)<sub>r</sub> group in the structure. The presence of an additional -CHCH<sub>2</sub>OH-(CH<sub>2</sub>)<sub>r</sub> group in A<sub>2</sub> disclosed by Peerman would provide advantages such increasing the polyols reactivity with isocyanate.



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Peerman et al. does not teach a specific weight ratio of  $A_1$ ,  $A_2$ , and  $A_3$  relative to each other. However, it is common practice in the art to optimize result effective variables such as the weight ratio of  $A_1$ ,  $A_2$ , and  $A_3$  relative to each other. At the time of the invention, a person of ordinary skill in the art would have found it obvious to optimize specific weight ratio of  $A_1$ ,  $A_2$ , and  $A_3$  relative to each other and would have been motivated to do so to obtain the desired functionality for preparing polyurethane and the ultimate desired end use of the polyurethane, and for forming polyol without a tendency to gel (Pg. 3, Lns. 15-20, Pg. 20, Lns. 30-36).

Claims 46-49 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peerman et al. (EP Pub. 0 106 491 A2) when taken with Rogier (US Pat. No. 4,216,344).

Peerman et al. render obvious the polyol of claim 45 as set forth above.

Regarding Claims 46-49: Peerman et al. teaches that triols disclosed in Rogier may be used (Pg. 12, Lns. 10-12). Rogier specifically discloses the triol may be glycerol (11:53-58). As glycerol has two primary hydroxyls and one secondary hydroxyls, and there are only thus only six possible combinations of ways to position either XH or XAH groups on the hydroxyl groups, all such combinations would could immediately be envisioned by one of ordinary skill in the art when employing glycerol as R, and thus such species would be anticipated. Peerman et al. further teaches using polyol residues (R) that is alkoxylated with an alkoxylating agent such as ethylene oxide or propylene oxide (Pg. 14, Lns. 14-30).

Regarding Claim 52: Peerman et al. teach the polyols are reacted with a polyisocyanate to form a polyurethane (Pg. 20, Lns. 31-36).

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***Double Patenting***

Applicant is advised that should claims 21 and 23 be found allowable, claims 50 and 51 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12 and 45 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of copending Application No. 11/665,097 in view of Peerman et al. (EP Pub. 0 106 491 A2). Both the instant claims and

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copending Application No. 11/665,097 claim the same polyester polyol of formulas I and II of the instant claims with the same A moieties.

Copending Application No. 11/665,097 does not teach the polyol that is alkoxyated. However, Peerman et al. teaches using polyol residues (R) that is alkoxyated with an alkoxyating agent such as ethylene oxide or propylene oxide (Pg. 14, Lns. 14-30). Copending Application No. 11/665,097 and Peerman et al. are analogous art because they are concerned with the same field of endeavor, namely producing polyurethanes from natural oil based polyester polyols. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the alkoxyating agents of Peerman et al. with the polyols of copending Application No. 11/665,097 and would have been motivated to do so to optimize the elastic properties of the resulting polyurethane which is dependent on polyol chain length as taught by Peerman et al. (Pg. 23, Lns. 32-35).

This is a provisional obviousness-type double patenting rejection.

### ***Response to Arguments***

Applicant's arguments with respect to claim 12-17, 19, 21, 23, and 42, specifically with regards to the newly added limitation that the polyol initiator residue is alkoxyated and has a number average molecular weight of at least about 625 have been considered and sufficiently responded to in the rejections above.

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*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER F. GODENSCHWAGER whose telephone number is (571)270-3302. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/  
Supervisory Patent Examiner, Art Unit 1796

/P. F. G./  
Examiner, Art Unit 1796  
September 25, 2009